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APPLICATION NO.	FILING DATE	FIRST NAMED INVENTOR	ATTORNEY DOCKET NO.	CONFIRMATION NO.	
09/920,554	08/01/2001	Graeme John Proudler	B-4240 618934-9	4232	
22879	7590	12/12/2005	EXAMINER DAVIS, ZACHARY A		
HEWLETT PACKARD COMPANY P O BOX 272400, 3404 E. HARMONY ROAD INTELLECTUAL PROPERTY ADMINISTRATION FORT COLLINS, CO 80527-2400			ART UNIT		PAPER NUMBER
			2137		

DATE MAILED: 12/12/2005

Please find below and/or attached an Office communication concerning this application or proceeding.

Office Action Summary	Application No. 09/920,554	Applicant(s) PROUDLER, GRAEME JOHN	
	Examiner Zachary A. Davis	Art Unit 2137	

-- The MAILING DATE of this communication appears on the cover sheet with the correspondence address --
Period for Reply

A SHORTENED STATUTORY PERIOD FOR REPLY IS SET TO EXPIRE 3 MONTH(S) OR THIRTY (30) DAYS, WHICHEVER IS LONGER, FROM THE MAILING DATE OF THIS COMMUNICATION.

- Extensions of time may be available under the provisions of 37 CFR 1.136(a). In no event, however, may a reply be timely filed after SIX (6) MONTHS from the mailing date of this communication.
- If NO period for reply is specified above, the maximum statutory period will apply and will expire SIX (6) MONTHS from the mailing date of this communication.
- Failure to reply within the set or extended period for reply will, by statute, cause the application to become ABANDONED (35 U.S.C. § 133). Any reply received by the Office later than three months after the mailing date of this communication, even if timely filed, may reduce any earned patent term adjustment. See 37 CFR 1.704(b).

Status

- 1) ☒ Responsive to communication(s) filed on 08 November 2005.
- 2a) ☐ This action is FINAL. 2b) ☒ This action is non-final.
- 3) ☐ Since this application is in condition for allowance except for formal matters, prosecution as to the merits is closed in accordance with the practice under *Ex parte Quayle*, 1935 C.D. 11, 453 O.G. 213.

Disposition of Claims

- 4) ☒ Claim(s) 1-29 and 31 is/are pending in the application.
- 4a) Of the above claim(s) _____ is/are withdrawn from consideration.
- 5) ☐ Claim(s) _____ is/are allowed.
- 6) ☒ Claim(s) 1-29 and 31 is/are rejected.
- 7) ☐ Claim(s) _____ is/are objected to.
- 8) ☐ Claim(s) _____ are subject to restriction and/or election requirement.

Application Papers

- 9) ☒ The specification is objected to by the Examiner.
- 10) ☐ The drawing(s) filed on _____ is/are: a) ☐ accepted or b) ☐ objected to by the Examiner.
 Applicant may not request that any objection to the drawing(s) be held in abeyance. See 37 CFR 1.85(a).
 Replacement drawing sheet(s) including the correction is required if the drawing(s) is objected to. See 37 CFR 1.121(d).
- 11) ☐ The oath or declaration is objected to by the Examiner. Note the attached Office Action or form PTO-152.

Priority under 35 U.S.C. § 119

- 12) ☐ Acknowledgment is made of a claim for foreign priority under 35 U.S.C. § 119(a)-(d) or (f).
- a) ☐ All b) ☐ Some * c) ☐ None of:
1. ☐ Certified copies of the priority documents have been received.
2. ☐ Certified copies of the priority documents have been received in Application No. _____.
3. ☐ Copies of the certified copies of the priority documents have been received in this National Stage application from the International Bureau (PCT Rule 17.2(a)).
- * See the attached detailed Office action for a list of the certified copies not received.

Attachment(s)

- | | |
|--|---|
| 1) <input checked="" type="checkbox"/> Notice of References Cited (PTO-892) | 4) <input type="checkbox"/> Interview Summary (PTO-413)
Paper No(s)/Mail Date. _____ |
| 2) <input type="checkbox"/> Notice of Draftsperson's Patent Drawing Review (PTO-948) | 5) <input type="checkbox"/> Notice of Informal Patent Application (PTO-152) |
| 3) <input type="checkbox"/> Information Disclosure Statement(s) (PTO-1449 or PTO/SB/08)
Paper No(s)/Mail Date _____ | 6) <input type="checkbox"/> Other: _____ |

DETAILED ACTION

Response to Amendment

1. A response under 37 CFR 1.116 requesting reconsideration in the present application was received on 08 November 2005.
2. Applicant's request for reconsideration of the finality of the rejection of the last Office action is persuasive and, therefore, the finality of that action is withdrawn.

Response to Arguments

3. Applicant's arguments, see pages 2-4 of the response filed 08 November 2005, with respect to the rejections of claims 1-6, 14-26, 29, and 31 under 35 U.S.C. 102(e) as anticipated by McNabb et al, US Patent 6289462, and of claims 7-13, 27, and 28 under 35 U.S.C. 103(a) as unpatentable over McNabb in view of "HP Virtualvault Trusted Web-Server Platform Product Brief", have been fully considered and are persuasive. Therefore, the rejection has been withdrawn. However, upon further consideration, a new ground(s) of rejection is made in view of the previously cited prior art in combination with England et al, US Patent 6327652, originally cited in the Office action mailed 02 February 2005, as set forth below.

Specification

4. The objection to the abstract is not withdrawn. Although the abstract has been reduced to a single paragraph and less than 150 words, the Examiner reminds Applicant that the form and legal phraseology often used in patent claims should be avoided in the abstract.

Claim Rejections - 35 USC § 103

5. The following is a quotation of 35 U.S.C. 103(a) which forms the basis for all obviousness rejections set forth in this Office action:

(a) A patent may not be obtained though the invention is not identically disclosed or described as set forth in section 102 of this title, if the differences between the subject matter sought to be patented and the prior art are such that the subject matter as a whole would have been obvious at the time the invention was made to a person having ordinary skill in the art to which said subject matter pertains. Patentability shall not be negated by the manner in which the invention was made.

6. Claims 1-6, 14-26, 29, and 31 are rejected under 35 U.S.C. 103(a) as being unpatentable over McNabb, US Patent 6289462, in view of England et al, US Patent 6327652.

In reference to Claims 1 and 2, McNabb discloses a method including a requester providing a specification of a service to be performed that establishes required sensitivity levels for processes in the service (see, for example, column 19, line 55-column 20, line 2, where different processes are specified for different sensitivity levels) and a computing platform executing the service according to the specification (see the Trusted Server of Figure 1, and column 5, lines 20-29) and logging

performance of the processes and providing the log to the requestor (the audit trail described at column 7, lines 28-33). However, although McNabb discloses sensitivity levels that describe required security (column 8, lines 33-37 and 10-15) and that there is a trusted computer system (column 8, lines 40-45), McNabb does not explicitly disclose details of establishing the trust in the computer system, nor does McNabb explicitly disclose levels of trust.

England discloses a method in which an operating system is securely loaded where each component of the system is associated with a trust level (column 4, lines 5-11) and each application is also determined to be trusted or non-trusted (column 9, lines 11-20). England further discloses logging performance (see, for example, column 4, lines 18-23). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method of McNabb to incorporate levels of trust as taught by England, in order to guarantee the ability to distinguish between trusted and non-trusted systems executing on the same computer (see England, column 3, lines 56-61).

In reference to Claim 3, McNabb further discloses a protected computing environment (see Figure 1).

In reference to Claims 4 and 23, McNabb further discloses measuring integrity of the platform (see column 8, lines 40-45, regarding the trusted computer system). England also discloses monitoring integrity (see, for example, column 12, lines 53-65).

In reference to Claim 5, McNabb further discloses a management process that allocates the execution of processes and logging to environments associated with the platform (see column 21, lines 34-55).

In reference to Claim 6, McNabb further discloses the management process within the protected environment (see column 21, line 34-column 22, line 2).

In reference to Claim 14, McNabb further discloses that a process may be swapped between environments (see column 11, line 66-column 12, line 14).

In reference to Claims 15-20, McNabb further discloses logging input data, output data, and executed program instructions of a process (see column 7, lines 28-33; column 23, lines 26-35).

In reference to Claim 21, McNabb further discloses encrypting the logging data (column 23, lines 26-35, where the audit record is protected).

In reference to Claim 22, McNabb further discloses the specification of the service establishing logging parameters for the processes (column 23, lines 26-35).

In reference to Claim 24, McNabb discloses a platform including a protected computing environment (see Figure 1) and one or more compartments (column 17, lines 9-14), in which processes may be executed for a user in the compartments and the results of the processes may be returned to the user as trustworthy data from the protected environment (see, for example, column 6, lines 20-23), and where the platform further includes a management process that receives a service description including required sensitivity levels for processes within the service (see, for example,

column 19, line 55-column 20, line 2, where different processes are specified for different sensitivity levels) and that allocates the processes to the compartments (column 21, lines 34-55). However, although McNabb discloses sensitivity levels that describe required security (column 8, lines 33-37 and 10-15) and that there is a trusted computer system (column 8, lines 40-45), McNabb does not explicitly disclose details of establishing the trust in the computer system, nor does McNabb explicitly disclose levels of trust.

England discloses a system in which an operating system is securely loaded where each component of the system is associated with a trust level (column 4, lines 5-11) and each application is also determined to be trusted or non-trusted (column 9, lines 11-20). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the platform of McNabb to incorporate levels of trust as taught by England, in order to guarantee the ability to distinguish between trusted and non-trusted systems executing on the same computer (see England, column 3, lines 56-61).

In reference to Claim 25, McNabb further discloses that the compartments may be located outside the protected environment (Figure 12; column 17, lines 57-61).

In reference to Claim 26, McNabb further discloses that the compartments may be located inside the protected environment (Figure 12; column 17, lines 57-61).

In reference to Claim 29, McNabb further discloses measuring integrity of the platform (see column 8, lines 40-45, regarding the trusted computer system). England also discloses monitoring integrity (see, for example, column 12, lines 53-65).

In reference to Claim 31, McNabb further discloses the management process within the protected environment (column 21, line 34-column 22, line 2).

7. Claims 7-13, 27, and 28 are rejected under 35 U.S.C. 103(a) as being unpatentable over McNabb in view of England as applied to claims 5 and 24 above, and further in view of "HP Virtualvault Trusted Web-Server Platform Product Brief", hereinafter "Virtualvault".

In reference to Claim 7, McNabb as modified by England discloses everything as applied to Claim 5 above. McNabb further discloses the use of compartments (see, for example, column 17, lines 9-14). However, McNabb does not explicitly disclose that the compartment contains a protected computing engine, nor does England. Virtualvault discloses a computing platform that includes the use of compartments, which include protected computing engines (see page 3, "Data Partitioning Separates and Secures Files"). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the method of McNabb and England to include compartments containing protected computing engines, in order to provide security for web servers (see Virtualvault, page 2, "Virtualvault: The Answer to Secure Access").

In reference to Claim 8, Virtualvault further discloses a Java virtual machine (see page 4, "A 'Vaulted' Java Virtual Machine").

In reference to Claim 9, McNabb further discloses that one or more compartments are located in the protected environment (see Figure 12; column 17,

lines 57-61). Further, Virtualvault further discloses that one or more compartments are located within the protected environment (see page 3, the INSIDE compartment).

In reference to Claim 10, McNabb further discloses that the computing engine is prohibited from operating on input data if it is not permitted to do so (see column 8, lines 10-15 on Mandatory Access Control).

In reference to Claim 11, McNabb further discloses that input data and processes are each provided with a type, and that the operation is prevented if the types do not match (see column 8, lines 10-15 on Mandatory Access Control).

In reference to Claims 12 and 13, McNabb further discloses that the input data may have an owner, and that the process may be required to inform the owner of the use of the data or to obtain consent from the owner to use the data (see column 8, line 54-column 9, line 4).

In reference to Claims 27 and 28, McNabb as modified by England discloses everything as applied to Claim 24 above. However, McNabb does not explicitly disclose that the compartment contains a protected computing engine, specifically a Java virtual machine, nor does England. Virtualvault discloses a computing platform that includes the use of compartments, which include protected computing engines (see page 3, "Data Partitioning Separates and Secures Files"). Virtualvault further specifically discloses a Java virtual machine (see page 4, "A 'Vaulted' Java Virtual Machine"). Therefore, it would have been obvious to one of ordinary skill in the art at the time the invention was made to modify the system of McNabb and England to include

compartments containing protected computing engines, specifically Java virtual machines, in order to provide security for web servers (see Virtualvault, page 2, "Virtualvault: The Answer to Secure Access").

Conclusion

8. The prior art made of record and not relied upon is considered pertinent to applicant's disclosure.

- a. Merklings et al, US Patent 5841869, discloses a system in which processes running in trusted compartments can be assigned a required level of trust.
- b. Richard et al, US Patent 5922074, discloses a system for distributed processing in which a client process requests a service from a server process, where the request can include a trust level, and where the processes can be on the same workstation.
- c. Chan et al, US Patent 6505300, discloses a system in which processes are given different permissions based on the level of trust for the process.
- d. Wood et al, US Patent 6892307, discloses a system in which trust levels requirements are established for various resources.

Any inquiry concerning this communication or earlier communications from the examiner should be directed to Zachary A. Davis whose telephone number is (571) 272-

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3870. The examiner can normally be reached on weekdays 8:30-6:00, alternate Fridays off.

If attempts to reach the examiner by telephone are unsuccessful, the examiner's supervisor, Emmanuel Moise can be reached on (571) 272-3865. The fax phone number for the organization where this application or proceeding is assigned is 571-273-8300.

Information regarding the status of an application may be obtained from the Patent Application Information Retrieval (PAIR) system. Status information for published applications may be obtained from either Private PAIR or Public PAIR. Status information for unpublished applications is available through Private PAIR only. For more information about the PAIR system, see <http://pair-direct.uspto.gov>. Should you have questions on access to the Private PAIR system, contact the Electronic Business Center (EBC) at 866-217-9197 (toll-free).

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SUPERVISORY PATENT EXAMINER